

utter on zinc plates (in cold weather wooden tables
do instead). In very warm weather the zinc

should be set on ice water. While the butter is melting, put a small amount of water in the middle of a thick board, and open the windows, and a current of air passing over it will evaporate all the moisture in warm weather, if the room is suitably ventilated. Care should be taken not to have any other moisture in the room, like water on the floor or wet things hanging on the wall, or any other cause of dampness. As soon as the butter is melted, it should be poured into a perfectly dry, pack it immediately; let there be no more working of it, and it is necessary to pack it solid in a jar or tub. This will secure unbroken the cravels of butter and its vital flavor. As soon as I can ascertain there will be no more rain, I will salt the butter. The process of brine salting. As a general thing, making for hospitals, gouty invalids and sick persons, the salting process should be omitted altogether. Butter made in this way without salt if sealed in cans

I have also an improved butter-tub which I hope will be able to present to you, but sickness has prevented this year. The butter-tub turned in halves, making the tubs like a match-box, and is made of ordinary porous wood, kiln-dried, then placed in an air-chamber, and after exhausting the air, set a solution of stone, which by atmospheric pressure will penetrate the pores of the wood, which becomes petrified and solid, and is then ready for use, increasing the weight of the tubs, &c over 6 to 8 cent. The tubs are heart-shaped and possess all the qualities of stone just.

This entirely new process proves especially successful with other persons, one of the most important desiderata.

of the fact that farmers suffer an average loss of five cents a pound upon all butter made in the United States in consequence of not fowing it of milk and butter, which are the sole cause of its rancidity, and I assure that consumers will hail Mr. Munroe as one of the benefactors of our race. The Committee, who at all official, social and judicial speak of the discovery of high time. The new process of manufacturing butter is also worthy of consideration.

The result of that work, as was predicted at the time, is greatly superior to the shallow culture of the more successful plowmen as will be seen by the following tenet, signed by the President of the Society, and two members of the Executive Committee. We commend its perusal to those who still believe that five is a sufficient depth for plowing. [Ed.]

We were present at the Plowing Trial of the Society of Agriculture and Horticulture of Westchester County last Fall, and saw the results of the experiment of Mr. J. A. Baird, Jr., who examined the crop of Corn grown upon the land, and found it was bettered, grown on the plot plowed by Mr. W. idently better than the rest of the field.

HENRY WOOD
JAMES A. BIRCHMILL

INDUSTRIAL AND SCIENTIFIC INTELLIGENCE.

TOPOGRAPHICAL MACHINE.—We witnessed on Saturday morning last, opposite the Wall-street Ferry, an experimental trial of a machine invented by Messrs. C. R. Clarke and Saml. Adams of Antioch, Calhoun, for making topographical surveys. Though apparently imperfectly conducted, as experimental machines usually are, yet we were surprised and pleased with the facility and accuracy with which it traced the shape of the ground over which it was

tion. By a very simple combination of cones and traction wheels, regulated by a pendulum, motion is given to a roll of paper and a grade-pen, the relative positions of which give an exact profile of the ground, whether with the vertical and horizontal distance traveled. For instance, when the machine is being drawn on a level surface the grade-pen remains stationary, while the paper moves at its maximum speed. If going up or down hill at an angle of say 45 degrees the grade pen moves in a vertical line, while the paper moves in a horizontal direction with the same speed that the grade pen moves in a vertical one, and the machine is drawn perpendicularly, the paper would stop, while the pen, having increased to its maximum speed, would draw a line in a vertical direction.

ness it. A number of practical and scientific gentlemen were present, among whom we noticed Col. Ramsey and Capt. Mexico of Mexico, the Messrs. Cook of Manchester, and a number of engineers, whose names we did not learn. We understood them all to press themselves highly pleased with the result of the experiment. The inventors pledge themselves to produce a machine within six months that will do the work with great facility, and with as much accuracy as can be attained with the instruments now in use, a small model of the machine is on exhibition at the Crystal Palace, where it is receiving the encomiums of the visitors and scientific men generally.

the State, has introduced on the New York and the Railroad a form of blast nozzle which has made the poor engines to which it has been applied equal to the best on the road for taking steam. It has been common to discharge the steam into the chimney through a round opening. Mr. C. simply forms it into a ring or annular passage, so that the escaping current presents a great surface both on its exterior and interior sides to act on the smoke and drag it up the chimney. It is a valuable improvement.

BENNETT'S INDIA-RUBBER SAFETY LAMP.—MORSE, Newburgh & Mott of this city are introducing a lamp of burning fluid, which compels the extinguishment

the lights as the top is unscrewed for filling and also holds the fluid in a bag of india-rubber within the body of the lamp, so that if the latter be broken the fluid cannot be spilled upon the person by any possible maneuver. The contents are also kept cooler by its arrangement, so that the consumption of fluid remains constant instead of increasing as the lamp becomes heated. It is an important invention. Motors are destroyed annually in the United States by accidents from burning fluids then by steamboats and bread disasters combined. This lamp will probably prevent 50 per cent of them, and should be immediately adopted where a better is offered.

NEW EDUCATIONAL GRINDING—Where high speed

little force is required in transmitting power from one wheel to another it is common to provide no teeth, but simply to let their smooth surfaces rub together. Mr. James Robertson has lately introduced in Scotland a "grooved surface frictional gearing," similar to the above except that the surfaces are let into each other in grooves. Messrs. Dron & Lawson of Glasgow are using this gearing with great success in driving gas engines, as it never slips, and is particularly well adapted to easy reversing. **IRON.**

LAKE CHAMPLAIN IRON.—Mr. Abel, Chemist to the English War Department, has been analyzing an ore of iron found in the State of New York, and has concluded to be "coming to Britain from Lake Champlain."

"In" fluids it to be very similar in its conditions the famous Swedish iron, and concludes it to be mainly adapted to the manufacture of steel, boiler plates, &c. There is no sulphur, a trifle of phosphorus, lime, water and manganese; 24 per cent of silica, over 30 per cent of the protoxyd and over 60 per cent of the sesquioxyd of iron. How long shall we wait English iron, while our soil is full of ore so much superior that it is proposed to freight it to Great Britain in large quantities?

ENGINE BUILDING IN AUSTRALIA.—A new steamship named the Nowra has been lately built in Australia and fitted with a pair oscillating engines of good workmanship, the first marine engines ever built

that Island, if not in fact the first ever built south of the equator. The engines and boiler were built by N. Russell & Co. of Sydney, a concern employing over 150 men, and fitted with a Namby steam hammer and tools capable of boring a steam cylinder 60 ins in diameter. The engines were fitted to be quite small and work non-stop, mainly, the boilers being compelled to sustain what the English term high pressure, equal to about 50 pounds per square inch.

For Supervisor—John Phillips.